INSTRUCTION MANUAL

MODEL 500FA

Super Stretch®

RICCAR

Your new
Super Automatic

For life long service of your sewing machine,
please remember these simple points.

★ Read this sewing manual carefully.

★ Keep your machine regularly oiled and cleaned.

★ Use only genuine high-grade machine oil.

★ IMPORTANT. Use only the best cotton. Remember always to use the same thickness and quality in the bobbin as the top reel.

★ IMPORTANT. In all communications with your dealer or when ordering additional accessories or spares for your machine always quote MODEL NO. and factory serial number which will be found beneath the head base.

CONGRATULATIONS!

You can be proud of your new zigzag sewing machine – an outstanding product of many years of research and development. The highest quality materials and functional design are combined in it to achieve perfect operating efficiency and years of dependable service.

If you have ever admired the beautiful and intricate sewing of professional seamstresses, you will be amazed and delighted to learn that you can now do it yourself with this remarkable zigzag sewing machine.

Before attempting to sew, however, please read this instruction book carefully, If you follow these instructions and give your machine proper care, it will operate perfectly for many years.

Should the machine fail to function correctly, stop sewing and review each step in the manual before starting again. Time spent in learning the features, controls and adjustments of your machine will eliminate errors and will result in complete satisfaction and enjoyment of your new sewing skills.

Yours very truly,

CONTENTS

		Page
1.	NAME OF MAIN PARTS	1
2.	OPENING AND CLOSING THE COVER	3
3.	FITTING SNAP-ON SEWING TABLE	4
4.	TURNING ON AND OFF THE LIGHT	5
5.	CORRECT NEEDLE AND THREAD FOR FABRICS	5
6.	INSERTING THE NEEDLE	6
7.	WINDING THE BOBBIN	6
8.	THREADING THE BOBBIN CASE	7
9.	INSERTING THE BOBBIN CASE INTO THE HOOK	8
10.	UPPER THREADING	9
11.	ADJUSTING THE PRESSURE DIAL	9
12.	ADJUSTING THE DROP FEED	10
13.	ADJUSTING STITCH LENGTH AND REVERSE SEWING	10
14.	ADJUSTING THREAD TENSION	11
15.	CHANGING THE PRESSER FOOT	11
16.	STRAIGHT STITCH SEWING	12
17.	START SEWING	13
18.	CHANGING SEWING DIRECTION	13
19.	REMOVING MATERIAL	14
20.	ADJUSTING ZIGZAG WIDTH	14
21.	MANUAL ZIGZAG SEWING	15
22.	AUTOMATIC ZIGZAG SEWING	16
23.	USING THE HEMMER	16
24.	PARALLEL SEWING (QUILTING)	17
25.	ZIPPER SEWING	18
26.	SATIN STITCH AND CURVING	18
27.	ATTACHING CORD (1)	19
28.	ATTACHING CORD (2)	19
29.	APPLIQUE	20
30.	EMBROIDERY	20
31.	MONOGRAM	20
32.	TWIN NEEDLE SEWING	21
33.	SEWING ON BUTTON, EYE, HOOK, ETC.	21
34.	PATCHING AND QUICK MENDING OF WORN-OUT PARTS	22
35.	ATTACHING INTERFACING	22
36.	FAGOTTING AND MENDING TEAR	23
37.	BLIND HEM STITCH	23
38.	BUTTONHOLE	24
39.	OVERCASTING EDGE (OF ELASTIC MATERIAL)	25
40.	SEWING ELASTIC MATERIAL	25
41.	ATTACHING ELASTIC TAPE	26
42.	FREE-ARM SEWING	26
43.	CLEANING THE FEED DOG	26
44.	CLEANING OF RACE AND SHUTTLE HOOK	27
45.	OILING THE ARM AND BED	28
46.	UNSATISFACTORY CONDITIONS: CAUSES AND REMEDIES	29

1. NEMES OF MAIN PARTS

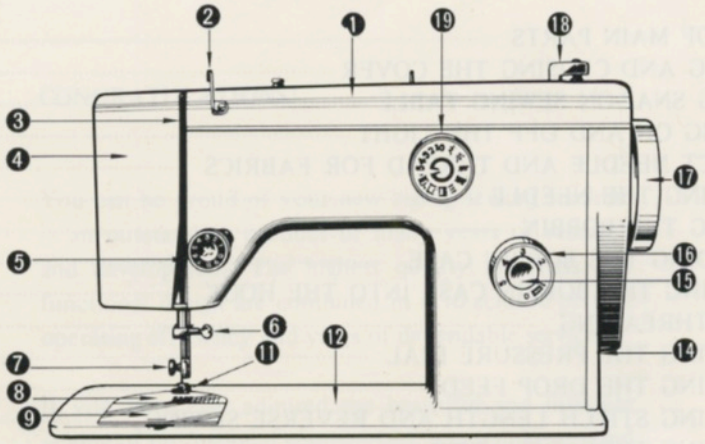


Fig. 1

Flat bed model

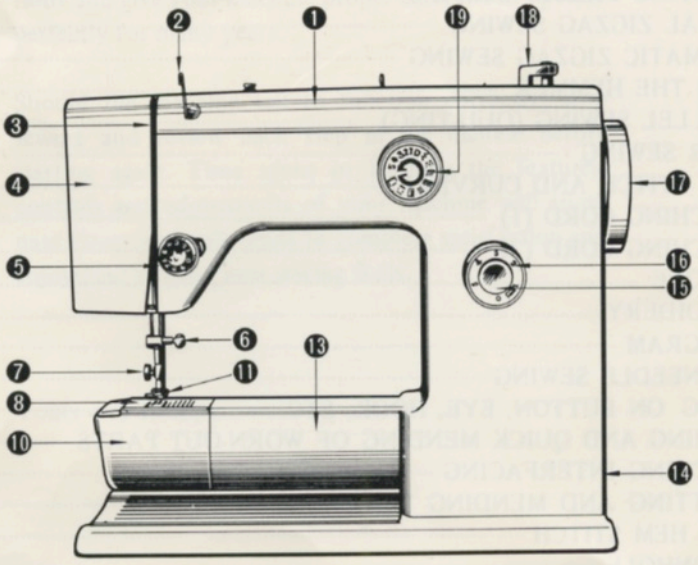


Fig. 2

Free arm model

1 Arm cover
2 Arm cover thread guide (2)
3 Thread take-up lever
4 Face plate
5 Dial tension
6 Needle clamp screw
7 Presser foot thumb screw
8 Needle plate
9 Slide plate
10 Shuttle hook cover
11 Presser foot
12 Bed
13 Free arm

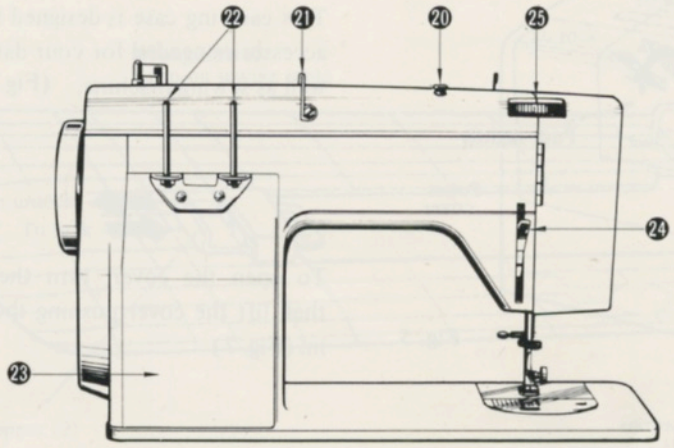


Fig. 3

Flat bed model

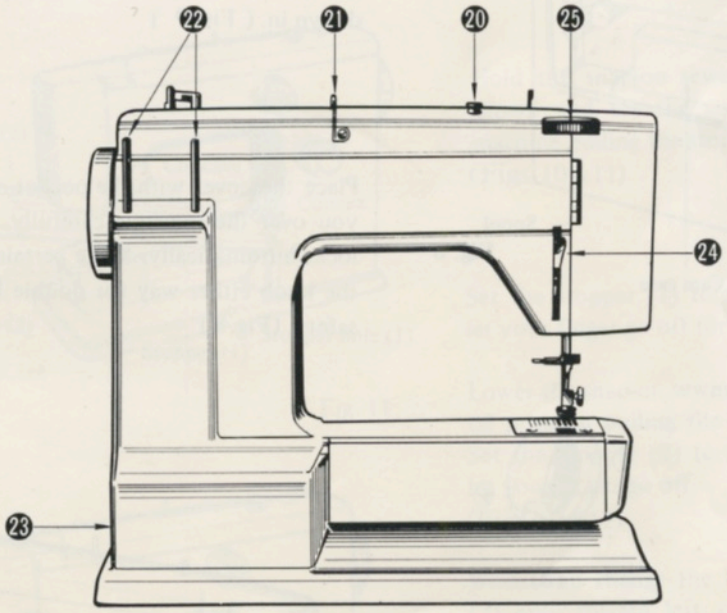


Fig. 4

Free arm model

14 Drop feed button
15 Reverse button
16 Feed dial
17 Hand wheel
18 Bobbin winder
19 Uni dial
20 Bobbin winder thread guide
21 Arm cover thread guide (1)
22 Spool pins
23 Motor cover
24 Presser bar lifter
25 Pressure dial

2. OPENING AND CLOSING THE COVER (Free arm only)

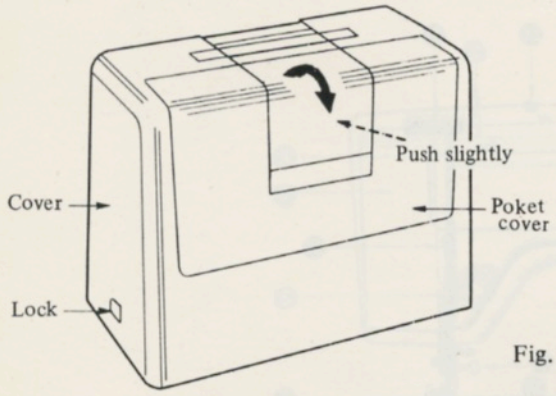


Fig. 5

This carrying case is designed for housing various accessories needed for your daily sewing works as well as sewing machine. (Fig. 5)

To open the cover, turn the locks either way then lift the cover pushing the locks all the way in. (Fig. 7)

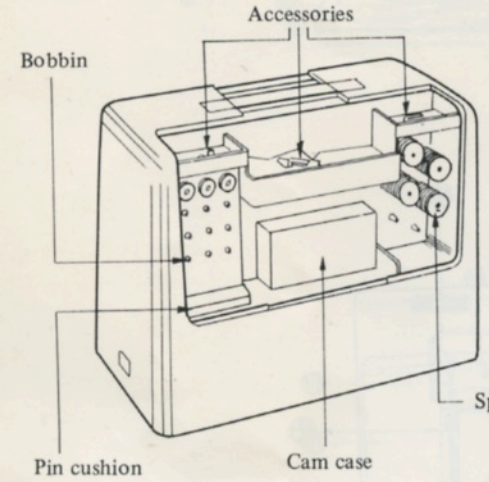


Fig. 6

To close the cover, place the foot control behind the free arm and the snap-on sewing table into the groove of the bottom located in front as shown in. (Fig. 9)

Place the cover with the pocket cover away from you over the machine carefully. Then the cover locks automatically. Make certain always to turn the knob either way for double locking for your safety. (Fig. 8)

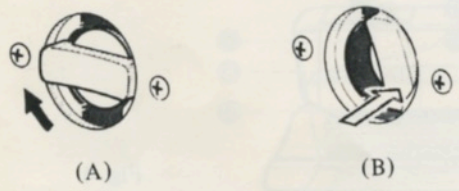


Fig. 7

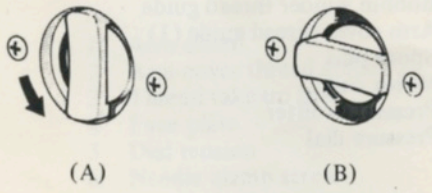


Fig. 8

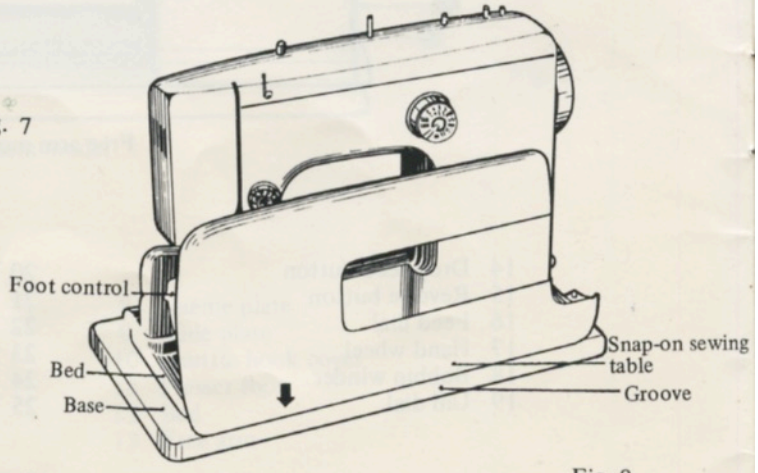


Fig. 9

3. FITTING THE SNAP-ON SEWING TABLE (Free arm only)

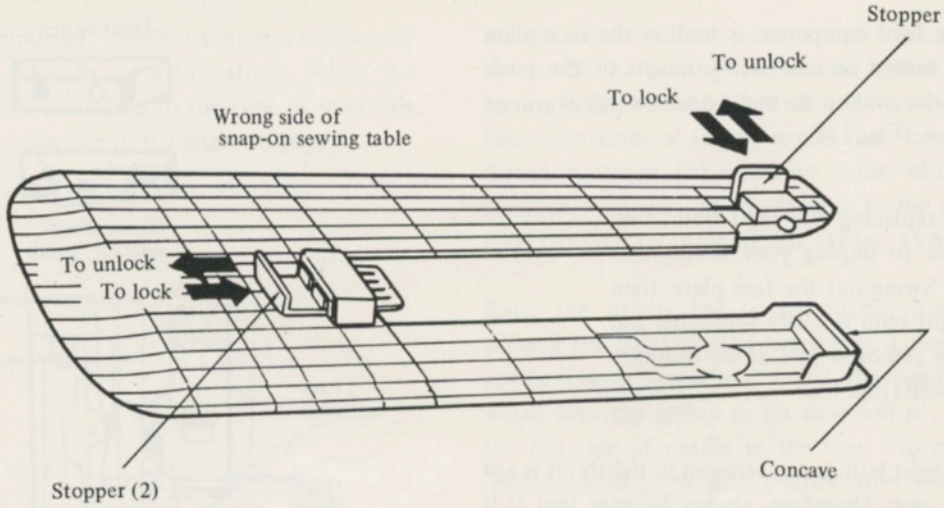


Fig.10

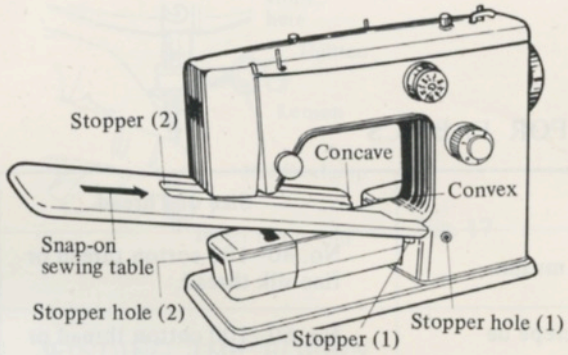


Fig. 11

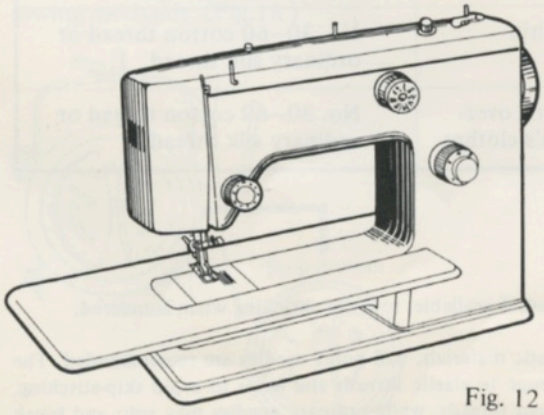


Fig. 12

Hold the snap-on sewing table on the slant as shown and set the concage to the convex of machine pulling the stopper (1).
(Figs.10&11)

Set the stopper (1) to the stopper hole (1) and let your finger go off for locking.

Lower the snap-on sewing table down to horizontal position pulling the stopper (2) toward left. Set the stopper (2) to the stopper hole (2) and let your finger go off.
(Figs.10&12)

When you change the bobbin, pull the stopper (2) only toward left and push the left side of snap-on sewing table upward. You do not have to remove it completely.

4. TURNING ON AND OFF THE LIGHT

Sewing light equipment is built in the face plate and is turned on and off by means of the push switch located on the right side of vertical arm of machine. (Fig. 13)

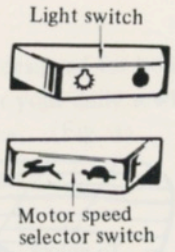


Fig. 13

When replacing the light bulb, first be sure to unplug your sewing machine. Swing out the face plate, then the light bulb is easily accessible and can be removed just as an ordinary light bulb (Fig. 14)

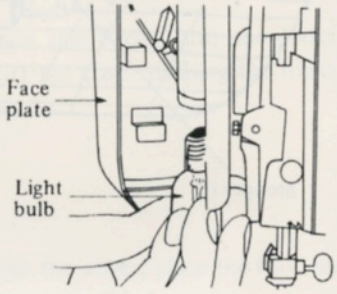


Fig. 14

If the light bulb is not screwed in tightly, it is apt to fall out. Therefore, always be sure that it is screwed in tightly.

5. CORRECT NEEDLE AND THREAD FOR FABRICS

Size of Needle	Fabric	Size of Thread
15 x 1 No. 9	Thin calico, silk, serge and muslin.	No. 80–100 cotton thread or fine silk thread.
15 x 1 No. 11	Thin calico, cotton cloth, crepé de chine, hosiery and silk.	No. 60–100 cotton thread or ordinary silk thread.
15 x 1 No. 14	Ordinary cotton cloth, thick silk, thin woolen goods, towels and shirting	No. 40–60 cotton thread or ordinary silk thread.
15 x 1 No. 16	Thick cotton cloth, serge and thin woolen goods.	No. 30–60 cotton thread or ordinary silk thread.
15 x 1 No. 18	Ordinary woolen goods, trousers, overcoats, thick calico and children's clothes.	No. 30–60 cotton thread or ordinary silk thread.

Notes: 1) Use a good quality mercerized cotton thread, if available, to avoid shrinking when laundered.

2) For sewing tricot, knitted fabrics and elastic materials, ball point needles are recommended. The use of the ball point needles prevents damage to elastic threads and helps to avoid skip-stitching, because the ball point needles sew between threads, while ordinary needles may split and break threads or skip stitched.

6. INSERTING THE NEEDLE

It is very important to select a correct needle and thread in order to get a fine stitch. Select the proper needle according to the type of materials to be sewn, referring to the chart on page 5.

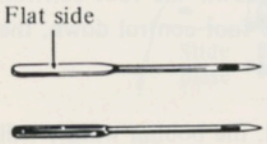


Fig. 15

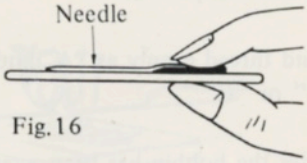


Fig. 16

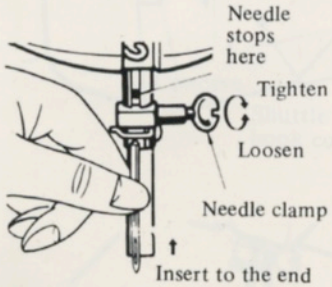


Fig. 17

A bent needle will not produce fine work. Check the needle by placing its flat side against a flat plane. If the needle is bent or a sharp point has been damaged, a faulty needle can cause (a) thread breakage (b) excessive noise while the machine is in motion (c) damage to the needle plate (d) skipped stitching, etc. (Figs. 15 & 16)

Raise the needle bar to its highest point by turning the hand wheel toward you. Loosen the needle clamp screw and insert the needle upwards into the clamp as far as it will go, facing the flat side of needle to the rear. Tighten the needle clamp screw with a screw driver. (Fig. 17)

After inserting the needle, check to see that it is correctly fitted. Turning the hand wheel toward you slowly, make sure that the needle is alined with the center of the hole of the needle plate. During this procedure the Uni dial must be set at "0"

7. WINDING THE BOBBIN

To wind the bobbin, first turn the stop motion large screw to counter-clockwise to disconnect a sewing mechanic. (Fig. 18)

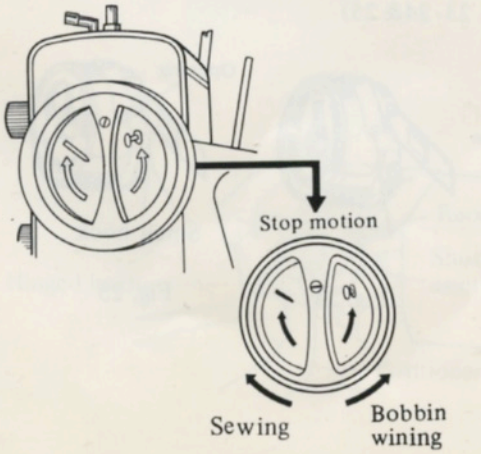


Fig. 18

Place a spool on the spool pin and lead thread through each threading point as illustrated in the Fig. 20.

Wind the thread around the bobbin several times and insert the bobbin on the bobbin winder spindle making certain that the notch of bobbin engages with the projection on the spindle. (Fig. 19)

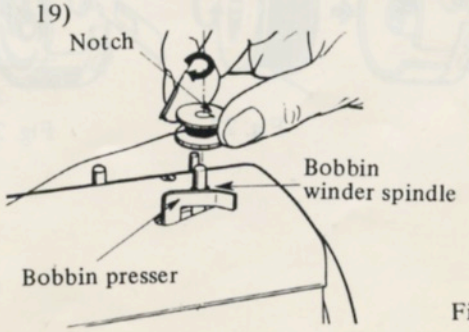


Fig. 19

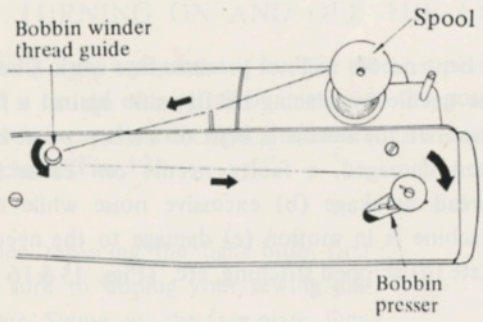


Fig. 20

Push the bobbin presser against the bobbin then turn the hand wheel slightly toward you while holding the end of the thread. See to it that the bobbin winder is not idling. (Fig. 20)

Place the foot control so that the foot rests on it comfortably. Start the machine for winding the bobbin gently pressing down the foot control. The more you press the foot control down, the faster the machine runs.

When the bobbin is full, the bobbin winder will automatically release.

Wind thread evenly as "A" and avoid winding as "B" or "C".

After the bobbin has been wound, turn the stop motion large screw toward clockwise for sewing.

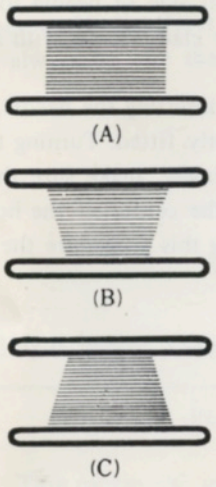


Fig. 21

8. THREADING BOBBIN CASE

Loosen out a few inches of thread from the bobbin. Put the bobbin into the bobbin case with the thread wound in the direction the arrow indicated in the figure 22.

Guide the thread into the slot under the spring. Then pull the thread under the tension spring until it emerges from the opening at the end of the spring and through under the small hook (Figs. 23, 24 & 25)

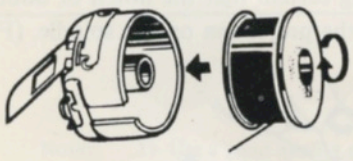


Fig. 22

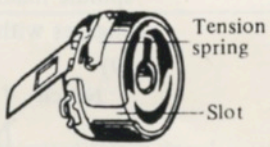


Fig. 23

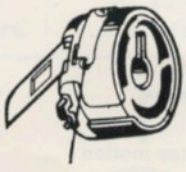


Fig. 24

Fig. 25

9. INSERTING THE BOBBIN CASE INTO THE HOOK

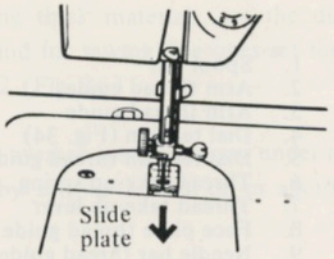


Fig. 26

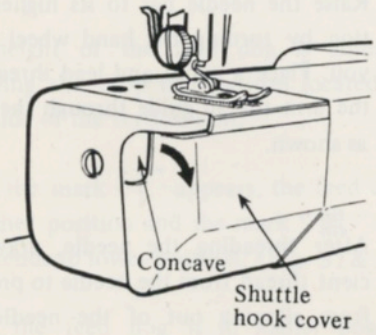


Fig. 27

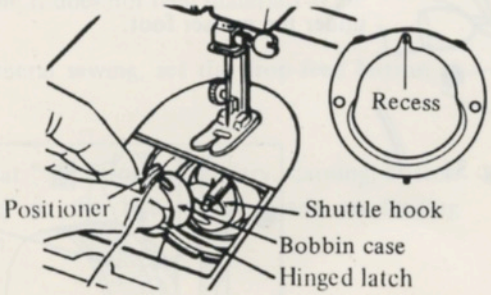


Fig. 28

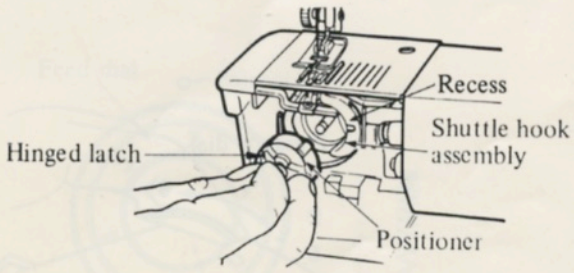


Fig. 29

1) Flat bed model

To insert the bobbin case on the spindle, raise the needle bar to its highest point by turning the hand wheel toward you. Then pull the slide plate toward you and lift it. (Fig. 26)

Pull about three inches of thread out of the bobbin case holding it by the hinged latch with your thumb and forefinger of your left hand.

Place the bobbin case on the spindle hanging the thread over your thumb nail.

Release the hinged latch checking to see that the positioner of the bobbin case fits in the recess at the top of the shuttle hook cover. (Fig. 28)

2) Free arm model

To insert the bobbin case on the spindle, raise the needle bar to its highest point by turning the hand wheel toward you. Then open the shuttle hook cover toward you. (Fig. 27)

Pull about three inches of thread out of the bobbin case holding it by the hinged latch with your thumb and forefinger of your left hand.

Place the bobbin case on the spindle hanging the thread over your thumb nail.

Release the hinged latch checking to see that the positioner at the right side of the bobbin case fits in the recess at the right side of the shuttle hook assembly. (Fig. 29)

10. UPPER THREADING

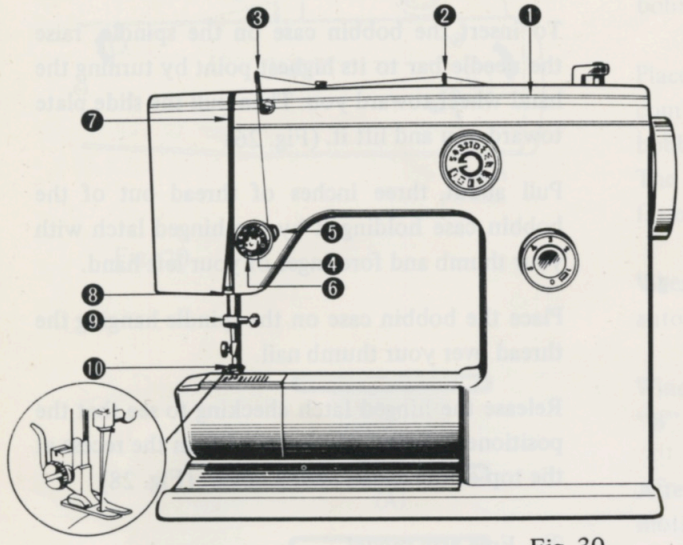


Fig. 30

1. Spool pin
2. Arm thread guide
3. Arm thread guide
4. Dial tension (Fig. 34)
5. Dial tension thread guide
6. Thread take-up spring
7. Thread take-up lever
8. Face plate thread guide
9. Needle bar thread guide
10. Needle

Raise the needle bar to its highest position by turning the hand wheel toward you. Place a spool and lead thread from the arm thread guide through the needle as shown.

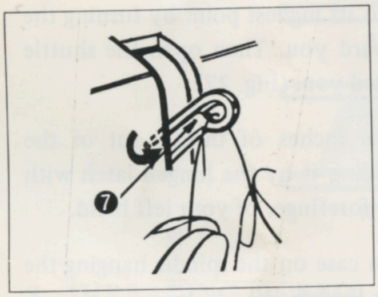


Fig. 32

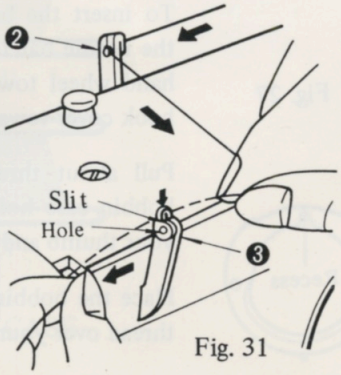


Fig. 31

After threading the needle, draw sufficient thread from the needle to prevent it from slipping out of the needle when starting the machine. Place both the needle and bobbin threads diagonally under the presser foot.

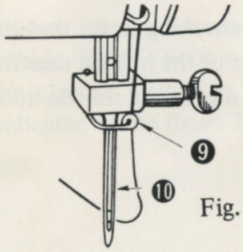


Fig. 33

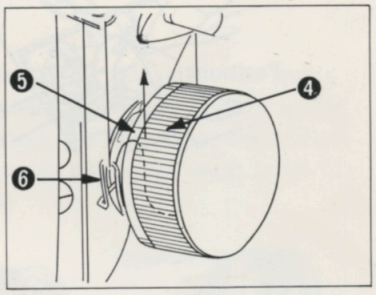


Fig. 34

11. ADJUSTING THE PRESSURE DIAL

Pressure should be adjusted considering the thickness of material to be sewn in order to make fine and even seams and to execute a regular feeding of materials.

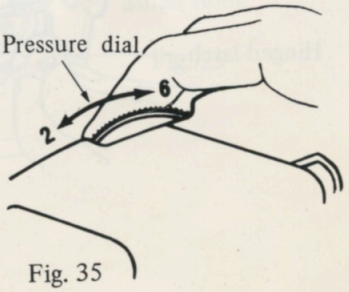


Fig. 35

Generally, a heavy pressure is required for thick materials and a light pressure for fine materials.

For sewing thick materials, set the dial on or about 6 and for sewing fine ones set the dial on or about 2. (Fig. 36)

In sewing average materials, sew under moderate pressure by setting the dial on or about 4. (Fig. 36)

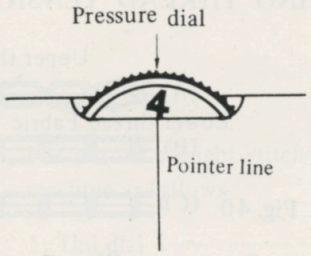


Fig. 36

12 ADJUSTING THE DROP FEED

The height of the feed dog is adjusted by switching the drop feed button located on the right side of the vertical arm.

When the mark "⋮" appears, the feed dog rises to higher position and the mark "▦" appears, it descends to lower position. (Fig. 37 & 38)

When the feed dog is in higher position, it functions to feed materials and when in lower position, it does not feed materials at all.

For general sewing, set the drop feed button at "⋮"

Set it at "▦" for embroidery, darning, button sewings or the like which needs no feeding motion.

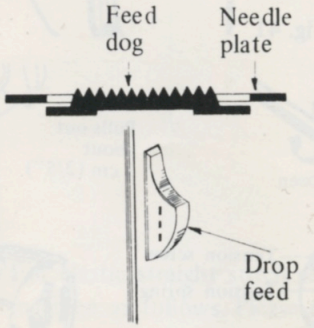


Fig. 37

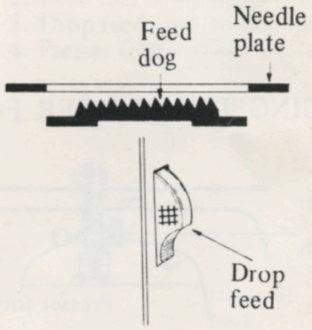


Fig. 38

13 ADJUSTING STITCH LENGTH AND REVERSE SEWING

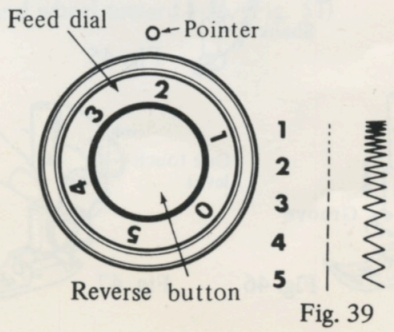


Fig. 39

Stitch length can be adjusted by means of the feed dial. The numerals on the dial represent the stitch length. The lower the numeral, the shorter the stitch length.

For reverse sewing push the reverse button. Reverse sewing will continue as long as the button is pushed. When the button is released, the machine will return to forward sewing. (Fig. 39)

14. ADJUSTING THREAD TENSION

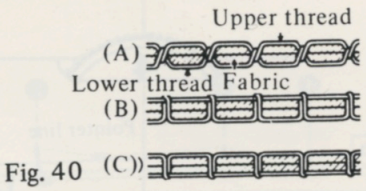


Fig. 40

A correctly locked stitch results when the upper and lower tensions are balanced so that the needle and bobbin threads are drawn equally into the material. (Fig. 40) The stitch "A" shows correct locking.

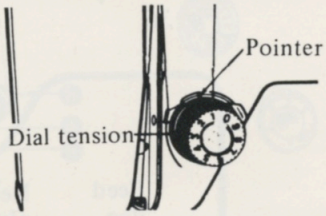


Fig. 41

The stitch "B" shows that the upper thread tension is too strong. This can be corrected by turning the dial tension to a lower number. (Fig. 41)

The stitch "C" shows that the bobbin thread tension is too strong. This can be corrected by turning it a higher number.

The higher the number, the stronger the upper thread tension. (Fig. 41)

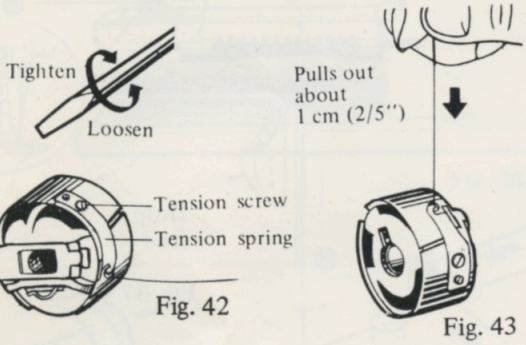


Fig. 42

Fig. 43

For usual sewing it is sufficient to adjust only the dial tension as explained above. Sometime, however, it comes to be necessary to adjust the bobbin thread tension by turning the bobbin case spring screw. (Figs. 42 & 43)

15. CHANGING THE PRESSER FOOT

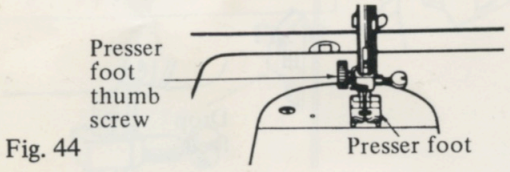


Fig. 44

To attach the shank, raise the needle bar to its highest point by turning the hand wheel toward you and attach the shank to the presser bar by means of the shank set screw. (Fig. 45)

Place a presser foot exactly under the shank. Lower the presser bar by means of the presser bar lifter checking to see that the groove of shank fits to the presser foot pin. Then pull the one-touch lever. (Fig. 46)

To take off the presser foot, pull the one-touch lever after having raised the needle bar. When you need a presser foot not included in your accessory box, please use the one for "high shank" and "center needle position". (Fig. 47)

Stop the needle bar at its highest position by turning the hand wheel toward you. Raise the presser foot by means of the presser bar lifter then loosen the presser foot thumb screw by turning it counterclockwise and take the presser foot off. Attach the desired presser foot by turning the presser foot thumb screw clockwise.

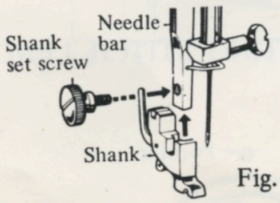


Fig. 45

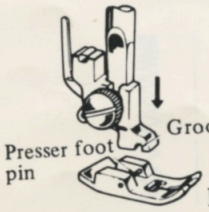


Fig. 46

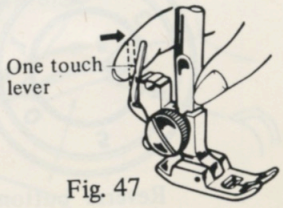


Fig. 47

16. STRAIGHT STITCH SEWING

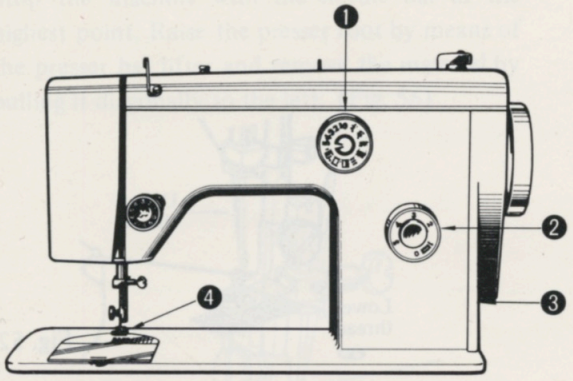


Fig. 48

For normal straight stitch sewing, set the machine as follows.

1. Uni dial 0
2. Feed Dial ..... 1 – 5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

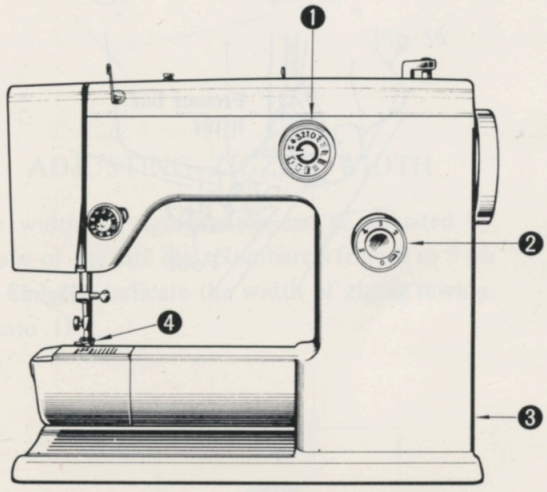


Fig. 49

For elastic straight stitch sewing, set the machine as follows. Please refer to SEWING ELASTIC MATERIAL on page 25.

1. Uni dial ..... ≡≡≡
2. Feed dial ..... 3 – 5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

In normal sewing, the zigzag foot is adequate. When special precision straight stitching is desired, change to the straight foot. (Fig. 50)

Universal foot

Fig. 50

In straight sewing, be sure that the needle is alined with the center of the needle hole of the presser foot and the needle plate by turning the hand wheel toward you. (Fig. 51)

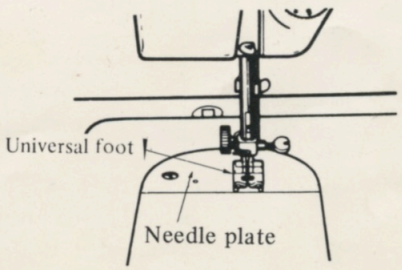


Fig. 51

17. START SEWING

Hold the upper thread lightly with your left hand. Turn the hand wheel toward you with your right hand until the needle enters into the needle hole to catch the lower thread and comes up again bringing it up through the needle hole. (Fig. 52)

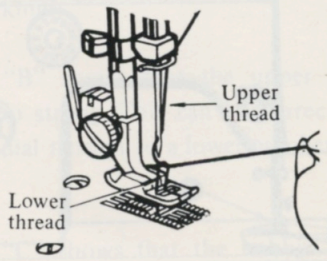


Fig. 52

Pick up the ends of both threads together and draw them through under the presser foot to the back of machine. (Fig. 53)

Place material under the presser foot and position needle in the material. Lower the presser foot by means of the presser bar lifter and start sewing.

It is not necessary to pull or push the fabric by hand, just guide it slightly in the desired direction. Place the foot control so that the foot rests on it comfortably. Start the machine by gently pressing down the foot control. The more you press the foot control down, the faster the machine runs.

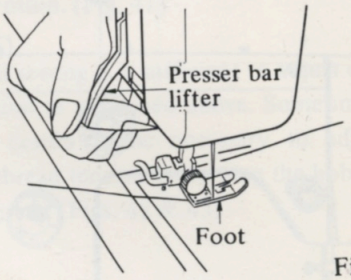


Fig. 53

18. CHANGING SEWING DIRECTION

To change sewing direction, raise the presser foot leaving the needle in the material and change the direction of the material. (Fig. 54)

After making the change, lower the presser foot and resume sewing. (Fig. 55)

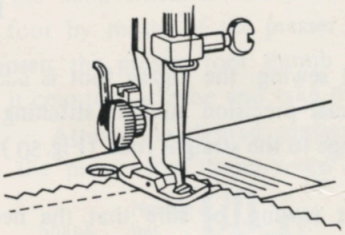


Fig. 54

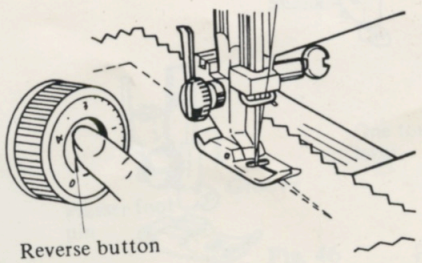


Fig. 55

19. REMOVING MATERIAL

Stop the machine with the needle bar at the highest point. Raise the presser foot by means of the presser bar lifter and remove the material by pulling it diagonally to the left. (Fig. 56)

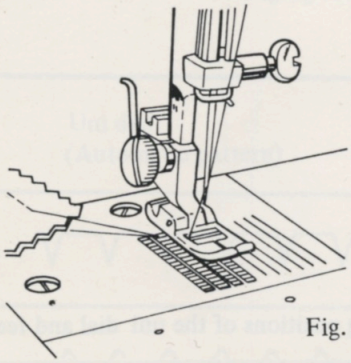


Fig. 56

Be sure to remove the material diagonally to the left and cut the thread with the thread cutter, leaving about 5 inches (12 cm) free at the ends. This makes it easier to resume sewing on the next stitch. (Fig. 57)

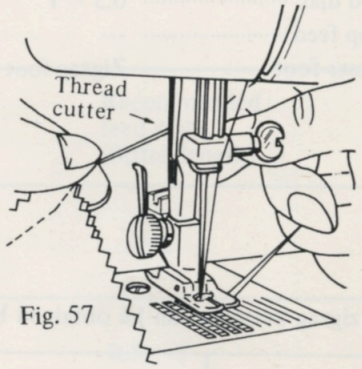


Fig. 57

20. ADJUSTING ZIGZAG WIDTH

The width of zigzag stitch can be adjusted by means of the uni dial. Numberals from 0 to 5 on the uni dial indicate the width of zigzag sewing. (Photo 1)

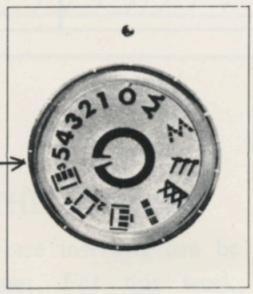


Photo 1

The lower the numeral, the narrower the stitch width.

The zigzag stitches illustrated here shows the width obtained with each uni dial setting from 0 to 5. (Fig. 58)

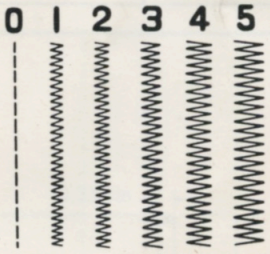


Fig. 58

21. MANUAL ZIGZAG SEWING

For sewing manual zigzag stitches, set the machine as indicated.

1. Uni dial ..... Desired zigzag width
2. Feed dial ..... 0.5 – 1
3. Drop feed ..... ---
4. Presser foot ..... Zigzag foot

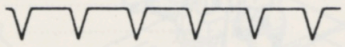
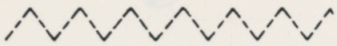
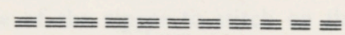
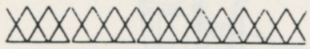
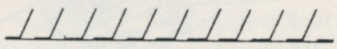
Varied zigzag patterns can be obtained by alternately changing positions of the uni dial and feed dial.

PATTERN				
UNI DIAL (Zigzag width)	Set dial between 1 – 5	Turn dial from 0 to 5 and return it from 5 to 0 at the same speed.	Turn dial from 0 to 5 and return it from 5 to 0 drawing same curved lines.	Turn dial slowly and at the same speed from 0 to 5 and return it quickly from 5 to 0.
FEED DIAL (Stitch length)	0.5 – 1	0.5 – 1	0.5 – 1	0.5 – 1

22. AUTOMATIC ZIGZAG SEWING

For sewing automatic pattern, set the machine as indicated.

1. Uni dial ..... Desired pattern
2. Feed dial ..... As recommended
3. Drop feed ..... ---
4. Presser foot ..... Zigzag foot

Uni dial (Automatic pattern)	Recommended feed dial (Stitch length)
	1~ 2
	0.5 ~ 1
	5
	5
	5

23. USING THE HEMMER

Edge sewing or lace inserting can be done by using the hemmer. For this work, set the machine as indicated below.

1. Uni dial ..... 0 ~ 2
2. Feed dial ..... 1 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Hemming foot

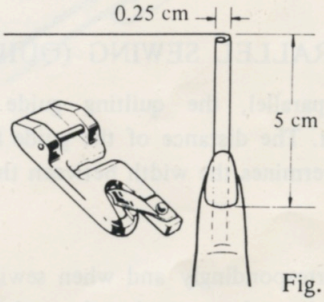


Fig. 59

For hemming, first cut off the front edge of the material so that the edge may easily be rolled into the scroll of the hemming foot. Use a punch to push the material under the presser foot. Take a few stitches slowly, holding the edge of the material with your right hand so that it can be rolled in smoothly, then start to sew fast. (Fig. 60)

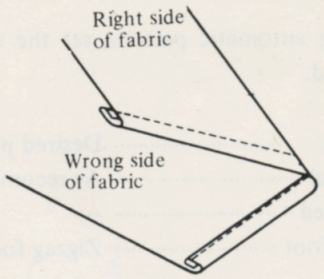


Fig. 60

When doing hemming and lace inserting at the same time, place the front portion of the lace edge under the hemming foot, inserting it in the incision. Place the lace on the edge of material in the overlap, this side of the lace edge in the incision, and let the needle pierce it. Then lower the presser foot and start sewing slowly. (Fig. 61)

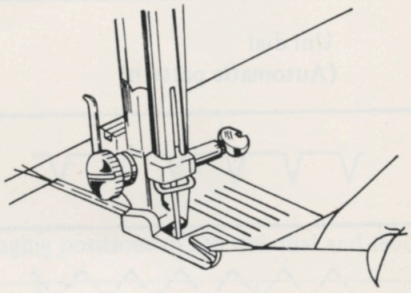


Fig. 61

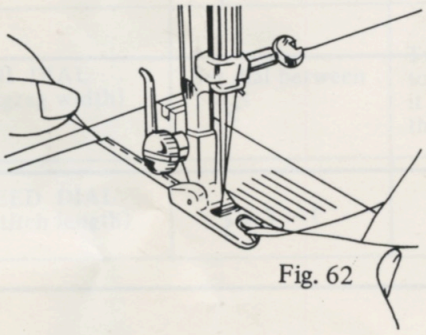


Fig. 62

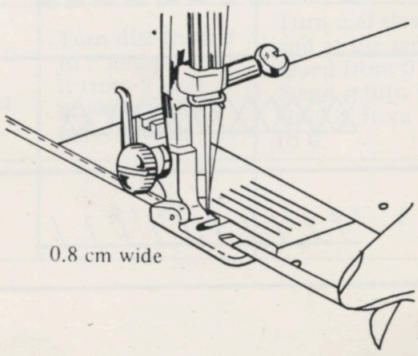


Fig. 63

24. PARALLEL SEWING (QUILTING)

To sew parallel, the quilting guide is very convenient. The distance of the guide from the needle determines the width between the row of stitches.

Adjust correspondingly and when sewing guide the fabric in such a way that the quilting guide runs always with the precedent seam. In such a way all the seams – the cross seams included – are quite parallel one with respect to the others. (Fig. 64)

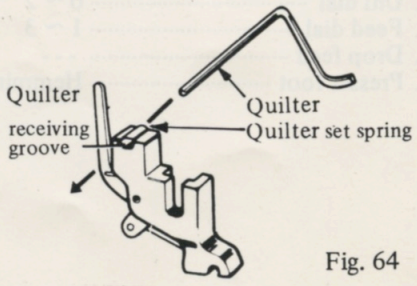


Fig. 64

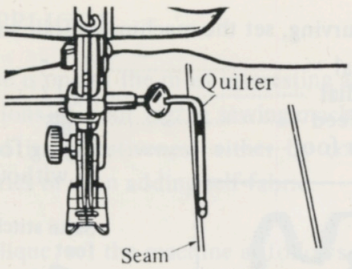


Fig. 65

Adjust position of quilter bar in order to get desired seams paralleled with other rows of seams. Guide the quilter bar along the edge of the material or on any other row of seam already sewn.

25. ZIPPER SEWING

For zigger sewing, set the machine as follows.

1. Uni dial 0
2. Feed dial ..... 1 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Zipper foot

Loosen the zipper foot thumb screw and adjust the position of the zipper foot by sliding it on the left side of the zipper to stitch on the left side of it. (Fig. 66)

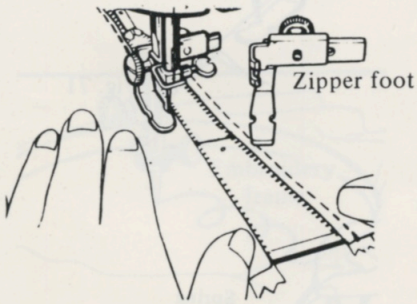


Fig. 66

Check the position by lowering the needle in the side notch making sure that it passes the zipper foot and tighten the zipper foot thumb screw.

Place folded edge of fabric along the edge of the zipper and lower the zipper foot. Open the zipper about 3/4" or 2 cm and stitch down the left side. Stop with the needle down in the fabric after stitching a bit and lift the zipper foot. Close the zipper, lower the zipper foot and stitch down to the end of the zipper. Secure the stitch and take the work out of the machine.

Stitch down the right side of the zipper by sliding the zipper foot to the right and follow the same procedure. (Fig. 67)

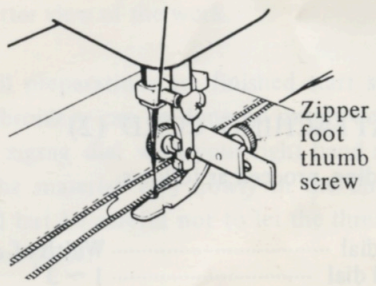


Fig. 67

26. SATIN STITCH AND CURVING

The satin stitch is easily sewn by setting the stitch dial between 0 and 0.5 This stitch is generally used for decorative pattern, monogram, etc.

For tapered satin stitch, just turn the zigzag dial to obtain a stitch with a fuller or tapered effects.

For sewing curving pattern, run the machine at half speed being careful to keep a full stitch while moving the material free handedly to create your curving design. Use an embroidery frame with a diameter between 4 to 5 inches, if necessary. (Fig. 68)

For the statin stitch, set the machine as follows.

1. Uni dial ..... 3 ~ 5
2. Feed dial 0.5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

For the curving, set the machine as follows.

1. Uni dial ..... 3 ~ 5
2. Feed dial ..... / / / /
3. Drop feed ..... ▦
4. Presser foot ..... Zigzag foot or without foot

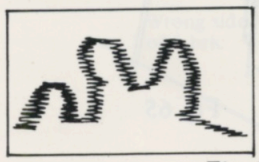


Fig. 68

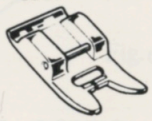


Fig. 69

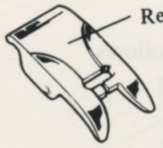


Fig. 70

27. ATTACHING CORD (1)

For attaching cord as illustrated, set the machine as follows.

1. Uni dial 0
2. Feed dial ..... 1 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Zipper foot

Loosen the zipper foot thumb screw and adjust the position of the zipper foot by sliding it on the left side of cord to stitch on the left side of it.

Check the position by lowering the needle in the side notch making sure that it passes the zipper foot and tighten the zipper foot thumb screw.

Stitch down the left side of the cord.

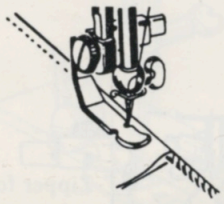


Fig. 71

28. ATTACHING CORD (2)

For cording, proceed as follows.

1. Uni dial ..... Width of cord
2. Feed dial ..... 1 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Cording foot

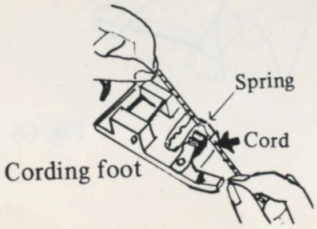


Fig. 72

Pass a cord or string through the hole of the cording foot. Adjust the zigzag width according to the width of cord. (Fig. 72)

Start sewing taking care that stitches appear one of outside edge and the other on inside of material. (Fig.73)

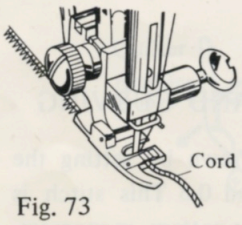


Fig. 73

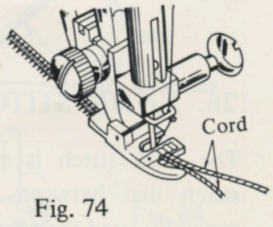


Fig. 74

29. APPLIQUE

Applique is one of the most interesting and fancy applications of your zigzag sewing machine. You will find its effectiveness either by contrasting two fabrics or even adding self-fabric.

For applique, set the machine as follows.

1. Uni dial ..... 0 ~ 3
2. Feed dial ..... 0.5 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

After the stitching has been completed, trim off all the excess material.

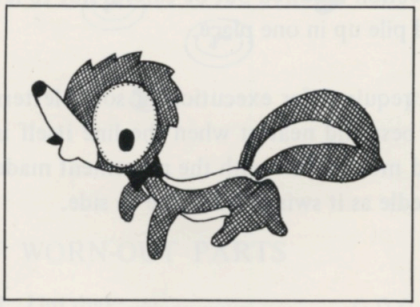


Fig. 75

30. EMBROIDRY

To make embroidery set the machine as belows.

1. Uni dial ..... 0 ~ 5
2. Feed dial ..... / / / /
3. Drop feed ..... ###
4. Presser foot ..... No foot needed

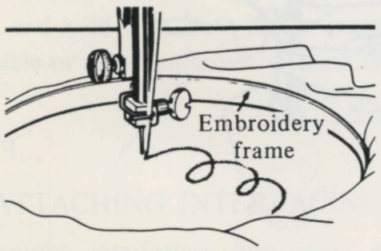


Fig. 76

Use an embroidery frame with a diameter between 4 to 5 inches and needle No. 11 together with embroidery thread. Stretch fabric tightly over the frame and secure it tight by tightening screw.

Set the machine to sew either straight or zigzag stitch according to the motiff to be sewn. After you have been accustomed to the embroidery work, you may do it without the foot in order to get a better view of the work.

When all preparations are finished start sewing. The embroidery can be done by simply controlling the zigzag dial with your right hand as you guide the material very slowly in the direction required but be careful not to let the thread pile up on one place.

31. MONOGRAM

To make monogram, set the machine as follows.

1. Uni dial ..... 3 ~ 5
2. Feed dial ..... / / / /
3. Drop feed ..... ###
4. Presser foot ..... Zigzag foot or without foot

Use embroidery frame mentioned in EMBROIDERY.

With both hands, guide the material very slowly in the direction required but be careful not to let the thread pile up in one place.

The lines required for execution of some letters are sewn best and neatest when the line itself is positioned most in line with the movement made by the needle as it swings from side to side.

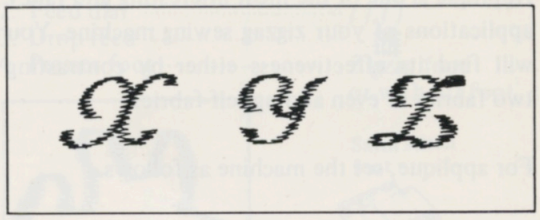


Fig. 77

32. TWIN NEEDLE SEWING

Insert the twin needle, the same way as the single needle. **(Fig. 79)**

Place two spools on the spool pins. Threading is done the same way as with the single needle but please be careful not to entangle.

You do twin needle sewing the same way as with the single needle but when changing sewing direction, do it with the twin needle at its highest position. If direction is changed with the twin needle in the material, the needle may get bent or broken.

Twin needle Fig. 78

When doing twin needle sewing, the zigzag dial must not be set larger than "3".

IF THE UNI DIAL IS SET ON 4 ~ 5, THE NEEDLE WILL STRIKE THE NEEDLE PLATE AND BE BENT OR BROKEN.

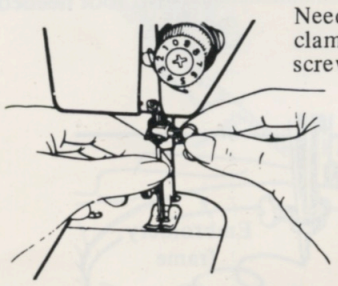


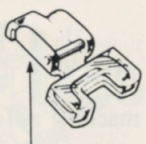
Fig. 79

33. SEWING ON BUTTON, EYE, HOOK, ETC.

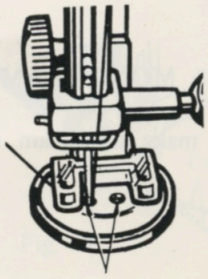
To sew on a button, eye, hook, etc., proceed as follows.

1. Uni dial ..... According to width between holes
2. Feed dial ..... ////
3. Drop feed ..... ###
4. Presser foot ..... Button foot

Place a button under the presser foot in the position where the needle goes into left hole of button. Lower foot and turn the hand wheel toward you until the needle comes out of hole. **(Figs. 80 & 81)**



Button foot Fig. 80



Holes of button Fig. 81

While moving the uni dial slowly, let the needle go down to the right hole by turning the hand wheel with left hand. Stop the uni dial at this position.

Run machine at medium speed and sew about six to eight stitches. Take about six stitches to fasten stitching setting the uni dial to "0".

Fig. 82

34. PATCHING AND QUICK MENDING OF WORN-OUT PARTS

Cover the damaged part with a like colored patch. Sew with the three step zigzag stitch around the edges of the patch with similar colored thread. Then cut out the defective parts of the original, close to the zigzag stitching. With this simple method the patching is done in one operation and extra thickness or fell seams are avoided. (Fig. 83)

1. Uni dial ..... ΛΛΛ
2. Feed dial ..... 0.5 ~ 1
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

The three step zigzag stitch helps you to darn and mend worn-out parts neatly and quickly. The quick mending is done by moving the fabric slowly and slightly sideways while the fabric is being stitched back and forth with the help of reverse sewing button. Stretch the material tightly and hold it as close to the presser foot as possible or use an embroidery frame. (Fig. 84)

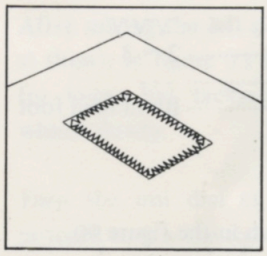


Fig. 83

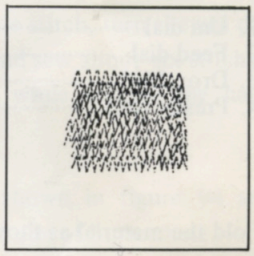


Fig. 84

35. ATTACHING INTERFACING

For securing interfacings into place, set the machine as follows.

1. Uni dial 5
2. Feed dial 5
3. Drop feed ..... - - -
4. Presser foot ..... Blind hem foot

This stitch ensures perfect tailoring and holds the interfacings firmly in place through laundering and dry cleaning.

Fold the fabrics as illustrated, placing outer fabric inside, interfacting outside.

Start sewing taking care that stitches appear one of outside edge and the other on inside of material. (Fig. 85)

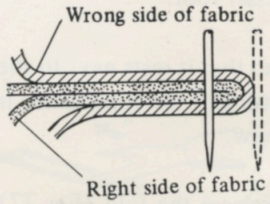


Fig. 85

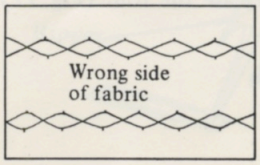


Fig. 86

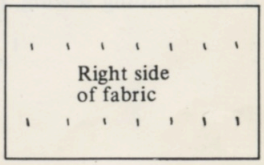


Fig. 87

36. FAGOTTING AND MENDING TEAR

To join two pieces of fabrics with one invisible stitch, set the machine as follows.

1. Uni dial ..... ⩚⩚⩚
2. Feed dial 0.5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

Place a piece of lining fabric under the tear or a part to be joined together, if necessary, and sew with matching thread.

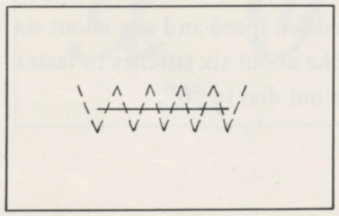


Fig. 88

37. BLIND HEM STITCH

This machine is provided with a specially designed blind hem stitch sewing foot. Good use of it can be made when sewing skirts, curtains, etc. The stitches do not show on the right side.
For this work set the machine as follows.

1. Uni dial ..... ⩛⩛⩛
2. Feed dial ..... 2 ~ 3
3. Drop feed ..... - - -
4. Presser foot ..... Blind hem foot

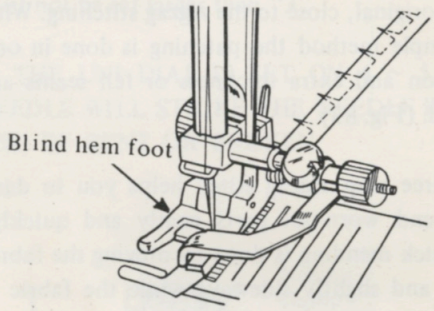


Fig. 89

Fold the material as shown in the figure 90

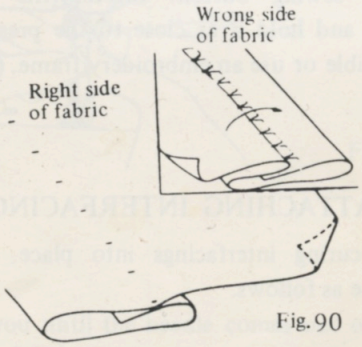


Fig. 90

Depending on the material to be sewn, adjust stitch length and zigzag width by controlling the feed and uni dials.

Turning the hand wheel toward you, stop the machine when the needle is to the extreme left and is about to pierce the material. Place the material so that the sideward stitches pierce the fold. Then lower the presser foot.

Adjust the stitch guide so that it rests next to the folding line and sew. Setting of the stitch guide is done with the thumb screw.

After finishing sewing, release the fold. (Fig. 77)

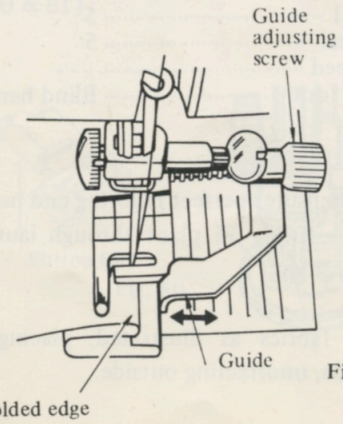


Fig. 91

38. BUTTONHOLE

Pointer

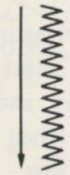


Fig. 92

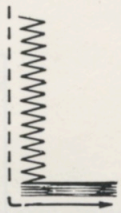


Fig. 93

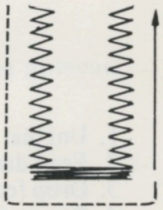


Fig. 94

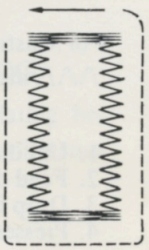


Fig. 95

To make buttonholes, set the machine as follows.

1. Uni dial ..... 1→2→3→4
2. Feed dial .....
3. Drop feed ..... - - -
4. Presser foot ..... Buttonhole foot

Trace length of buttonhole with chalk on material and sew slowly following markings, so you can stitch buttonhole exactly as you desire. It is suggested that you make test samples on a piece of same fabric before you stitch buttonholes on the garment you are making.

Set the uni dial as shown in figure 92 and sew the left side stitch of buttonhole at desired length.

After sewing the left side stitch, turn the uni dial as shown in figure 93 and sew about six stitches for lower bar tacking while turning the hand wheel slowly.

Turn the uni dial as shown in figure 94 and proceed to sew the right side of buttonhole.

After sewing the right side seam, turn the uni dial as shown in figure 95 and sew about six stitches for upper bar tacking while turning the hand wheel slowly.

Cut the opening for the button with the ripper taking care not to cut the seam.

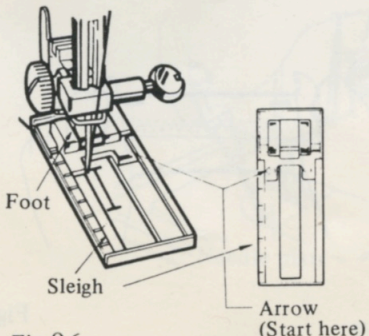


Fig. 96

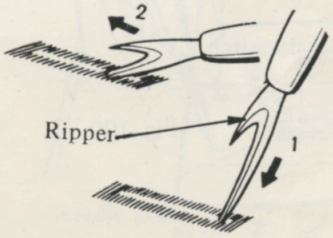


Fig. 97

39. OVERCASTING EDGE (OF ELASTIC MATERIAL)

To finish off edge of material and to give durable finish where material is subject to being stretched and has a tendency to ravel, set the machine as follows.

1. Uni dial ..... ⋀⋀⋀ ⌇⌇⌇⌇
2. Feed dial 5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot or blind hem foot

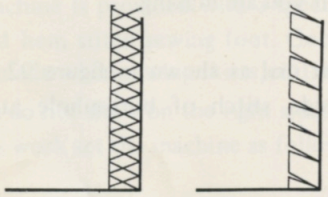


Fig. 98

Start sewing taking care that stitches appear one of outside edge and the other on inside of material.

Overcasting with stitches such as ⋀⋀⋀ or ⌇⌇⌇⌇ is the most ideal for jersey, terry cloth, knitted fabric and other elastic materials which must be stretched after they have been sewn to ensure fullness required in the materials.

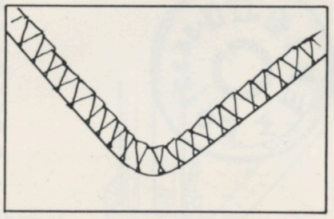


Fig. 99

40. SEWING ELASTIC MATERIAL

Triple lock stitch makes two stitches forward and one stitch backwards for triple strength stitch for trouser seats, backs, under arms, anywhere materials are subjected to strain. The thread just does not break as in normal straight stitch yet elastic enough.

Set the machine as follows.

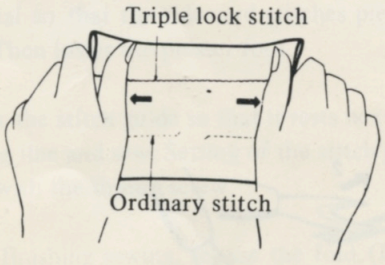


Fig. 100

1. Uni dial ..... ≡≡≡
2. Feed dial ..... 3 ~ 5
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

For elastic zigzag sewing, set the pattern dial to ⋀⋀⋀ instead of ≡≡≡.

1. Uni dial ..... ⋀⋀⋀
2. Feed dial ..... 0.5 ~ 1
3. Drop feed ..... - - -
4. Presser foot ..... Zigzag foot

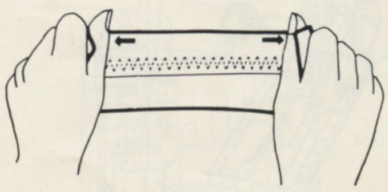
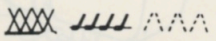


Fig. 101

41. ATTACHING ELASTIC TAPE

For stitching elastic tapes into waistbands, cuffs, etc., set the machine as follows.

1. Uni dial ..... 
2. Feed dial ..... 5 0.5 ~ 1
3. Drop feed ..... --- "
4. Presser foot ..... Zigzag foot "

The above zigzag stitches remain supple and stretch as the elastic tapes do.

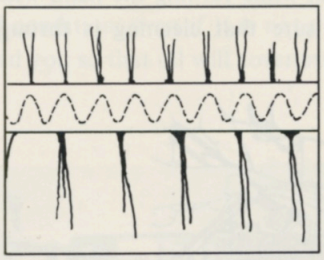


Fig. 102

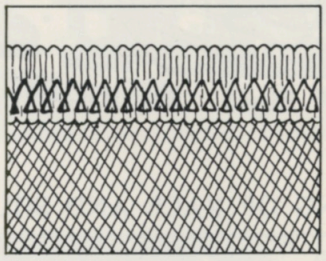


Fig. 103

42. FREE-ARM SEWING (Free arm only)

Take off the snap-on sewing table and use the free arm for sewing on hard to get at spot with an ordinary flat bed machine.

It helps you sew sleeves, trousers, bag garments or darn socks.

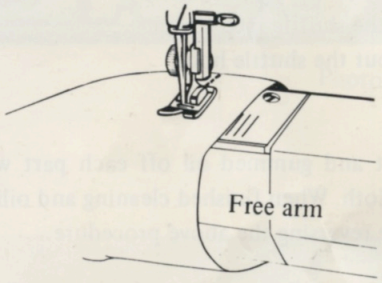


Fig. 104

43. CLEANING THE FEED DOG

Pieces of thread and/or dust accumulating between the needle plate and feed dog will cause trouble.

Always keep the machine clean. Remove the needle, presser foot and needle plate with a screw driver. (Figs.105 & 106)

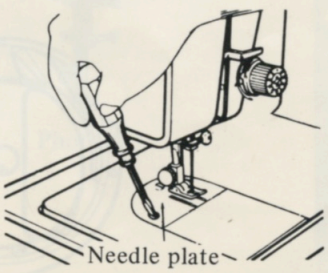


Fig. 105

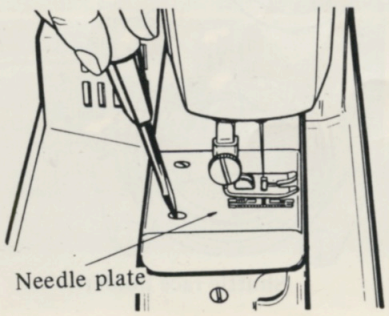


Fig. 106

After removing the parts, clean all necessary parts with a brush while turning the hand wheel toward you. Be sure that cleaning is through.

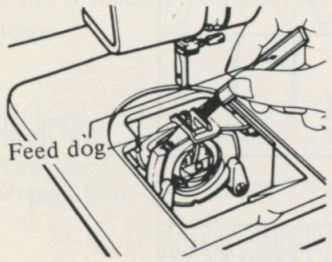


Fig. 107

When finished, reassemble the machine, reversing the above procedure. (Figs. 107 & 108)

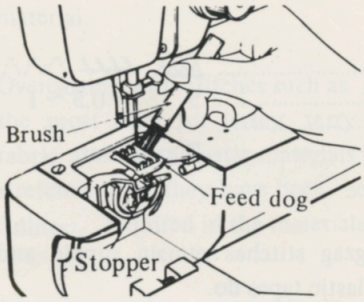


Fig. 108

44. CLEANING OF RACE AND SHUTTLE HOOK

1. Flat bed model

Raise the needle bar to its highest point by turning the hand wheel toward you. Open the slide plate. (Figs. 109 & 110)

1) Take out the bobbin case.
2) Unlock the shuttle race holder.
3) Open the shuttle race cover.
4) Take out the shuttle hook

Clean dust and gummed oil off each part with an oiled cloth. When finished cleaning and oiling, reassemble reversing the above procedure.

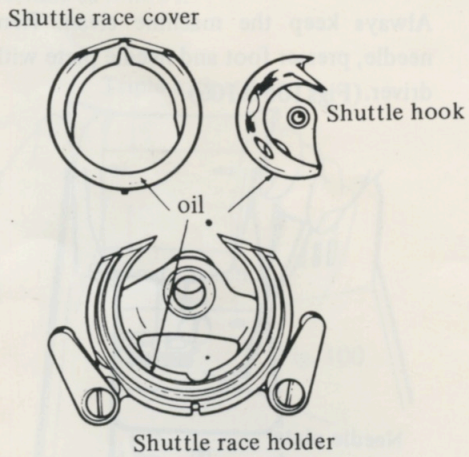


Fig. 109

2. Free arm model

Raise the needle bar to its highest point by turning the hand wheel toward you. (Fig. 111)

1) Open the shuttle race cover.
2) Take out the bobbin case.

Clean dust and gummed oil off the shuttle hook with an oiled cloth. When finished cleaning and oiling, reassemble reversing the above procedure.

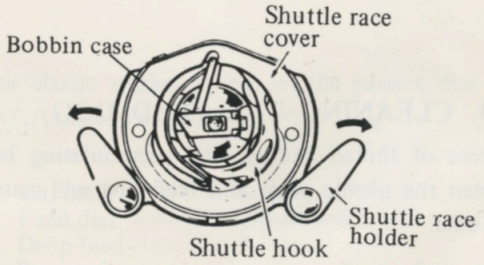


Fig. 110

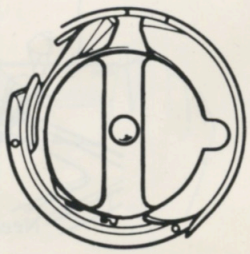


Fig. 111 Shuttle hook

45. OILING THE ARM AND BED

Oil the machine at least once a month to keep it in good condition, even if it is not used for a long period. While oiling, turn the hand wheel slowly toward you so that oil will cover every part

(1) Flat bed model

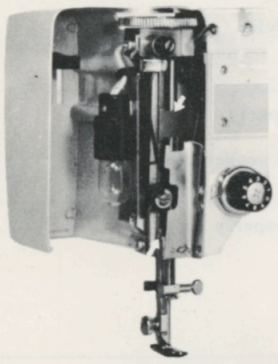


Photo 2

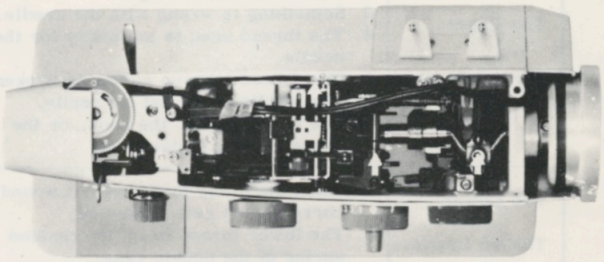


Photo 3

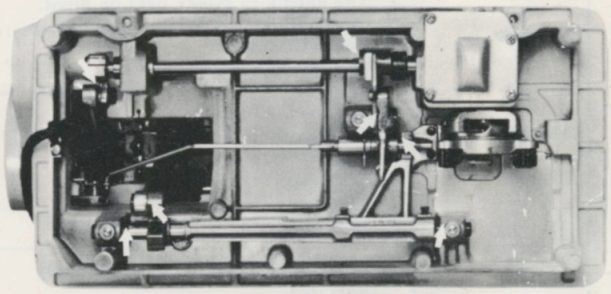


Photo 4

(2) Free arm model

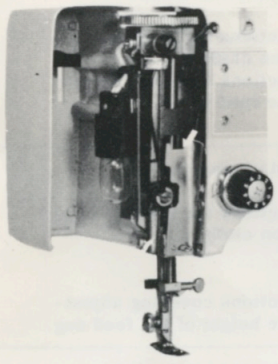


Photo 5

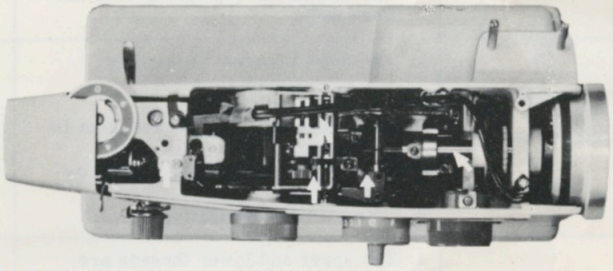


Photo 6

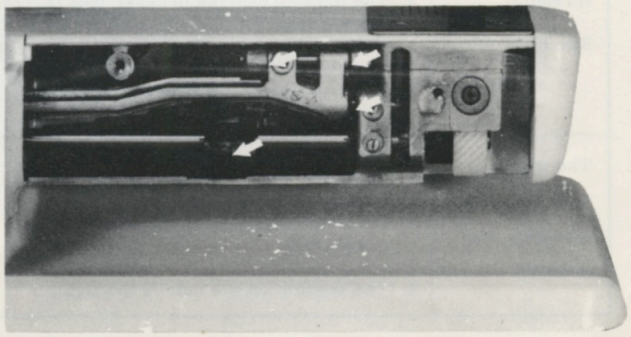


Photo 7

46. UNSATISFACTORY CONDITIONS: CAUSES AND REMEDIES

Unsatisfactory Condition	Cause	Remedy
The Upper Thread Breaks	1. The needle is not threaded correctly. 2. The tension is too tight. 3. Something is wrong with the needle. 4. The thread used is too heavy for the needle. 5. The thread take-up spring is broken. 6. The needle is not set correctly. 7. The needle plate, the hook, or the pressure foot is damaged.	Thread the needle correctly. Loosen it. Replace it. Replace it. Replace it. Set it correctly. Replace it.
The Lower Thread Breaks	1. When the lower thread is not wound correctly, it gets entangled. 2. The lower thread is off the tension spring of the bobbin case.	Wind it properly. Put it in its proper position.
Skipped Stitches	1. The needle is not attached to the needle bar correctly. 2. The needle is either bent or blunt. 3. The pressure of the presser bar is not sufficient. 4. The wrong needle is used.	Attach it properly. Replace it. Tighten it. Replace it.
The Needle Breaks	1. The needle is bent. 2. The needle is not attached properly. 3. The material is too thick or heavy. 4. The material is being pulled by operator. 5. The needle is of inferior quality.	Replace it. Attach it correctly. Use proper needle. Don't pull on the cloth. Replace it with proper needle.
Stitching Forms Loops	1. The thread tension is not properly adjusted. 2. The needle is not threaded correctly and/or the bobbin is not wound properly. 3. The weight or thickness of the material and the size of the needle are not in accord. 4. The thread take-up spring does not work well.	See instructions for adjustment of upper and lower thread tensions. Thread and/or rewind properly. See instructions covering the use of proper needles and threads with varying materials. Replace it.
Seams Shrink or Pucker	1. The thread tension is too tight. 2. The pressure of the presser foot is too strong. 3. The position of the feed dog is too high. 4. Use straight sewing foot.	See instructions for adjustment of upper and lower thread tensions. See instructions for proper pressure on cloth. See instructions covering adjustment of the feed dog.
Irregular Stitching	1. The upper and lower threads are of inferior quality. 2. The pressure on the presser foot is inadequate. 3. The thread is wound around the bobbin. 4. The position of the feed dog is too low.	Use thread of good quality. See instructions for proper pressure on cloth. Rewind it. See instructions covering adjustment of the height of the feed dog.
The machine does not work smoothly and is noisy.	1. The machine is in need of oil. 2. Dust and waste thread have collected in the hook mechanism. 3. Oil of inferior quality is used and has coagulated 4. The tension on the belt is too tight.	Apply oil as per instructions. See instructions on cleaning of the race and hook. Clean throughly and oil again with proper sewing machine oil of best quality. Loosen it.

J

INSTRUCTION MANUAL

MODEL 500FA

Super Stretch

ENG 500 FA (1) Printed in Japan